

What is claimed:

1. A device for measuring the volume of liquid in a container, said device comprising,

a float moveable in response to changes in the volume of said liquid in said container,

a magnetically conductive member having a magnetic field passing therethrough,

a sensor for sensing the strength of a portion of said magnetic field and for generating a signal responsive to said strength,

said sensor positioned in said magnetic field and spaced from said magnetically conductive member, and

means connected to said float for moving one of said magnetically conductive members and said sensor relative to the other of said magnetically conductive member and said sensor wherein said signal generated by said sensor is a function of said volume of said liquid in said container.
2. The device of claim 1 wherein the relationship between a level of said liquid in said container to the volume of said liquid is not linear.
3. The device of claim 1 and further comprising means responsive to said signal for displaying the volume of liquid in said container.
4. The device of claim 1 wherein the spacing between said magnetically conductive member and said sensor changes in response to movement of said float.

5. The device of claim 1 wherein said magnetically conductive member is a magnet.

6. The device of claim 1 and further comprising
a magnet remote from said magnetically conductive member, and
a flux concentrator for directing flux of a magnetic field through said magnetically conductive member and across said sensor.

7. The device of claim 1 wherein the strength of said magnetic field passing through said magnetically conductive member is stronger through some portions thereof than through other portions thereof.

8. The device of claim 7 wherein said magnetically conductive member has a contoured shape and a thickness that varies across said contoured shape wherein a greater magnetic field passes through thicker portions of said contour than thinner portions thereof.

9. The device of claim 1 wherein said sensor is a Hall-Effect sensor.

10. The device of claim 1 further wherein the electronic device is a fuel gauge.

11. The device of claim 1 further wherein the liquid is fuel.

12. The device of claim 11 further wherein the fuel includes methanol.

13. A device for detecting the volume of a fuel in a container, comprising:

a magnet having a magnetic field;

a sensor for sensing the strength of the magnetic field, the sensor further generating an electronic output that is a function of the strength of the magnetic field;
and

said magnet spaced a distance from the sensor that varies as a function of the volume of liquid in the container.

14. the device of claim 13 further wherein the sensor is a Hall-Effect sensor.

15. The device of claim 14 further wherein the Hall-Effect sensor is linear.

16. The device of claim 3 further wherein the strength of the magnetic field varies as a function of the volume of the container.

17. The device of claim 13 further including a float adapted for floating on the surface of the fuel, wherein the distance of the magnet from the sensor varies as a function of the level of the float.

18. The device of claim 13 further including an electronic device that receives the electronic output of the magnetic sensor and indicates that volume of the fuel in the container.

19. The device of claim 18 further wherein the electronic device is a fuel gauge.

20. The device of claim 13 further wherein the fuel includes methanol.

21. A device for measuring the volume of fuel in a tank comprising
means for generating a magnetic field,
sensor means for sensing the field strength of a portion of said magnetic field
and for generating a signal responsive to said portion of said magnetic field,
means for varying the portion of said magnetic field detected by said sensor
means wherein said portion detected by said sensor is a function said volume in said tank.

22. The device of claim 21 wherein said means for varying the portion of said magnetic field comprises means for varying the distance between an outer surface of a magnetically conductive member and said sensor means.

23. The device of claim 2 wherein said means for varying the portion of said magnetic field comprises providing a magnetically conductive member having a thickness wherein portions of said member have a greater thickness than other portions thereof.